

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

MINTON *et al.*, § Case No. 4:21-cv-00143
Plaintiffs, §
§

v. §
§

INTERCONTINENTAL TERMINALS §
COMPANY LLC, *et al.*, §
Defendants. §
§

AND §
§

IN RE: INTERCONTINENTAL § Case No. 4:19-cv-01460
TERMINALS COMPANY LLC §
DEER PARK FIRE LITIGATION §

**DEFENDANT INTERCONTINENTAL TERMINALS COMPANY LLC'S
RESPONSE IN OPPOSITION TO NSK LTD.'S MOTION TO EXCLUDE
CERTAIN OPINIONS OF MR. ERIC BENSTOCK**

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Defendant Intercontinental Terminals Company LLC (“ITC”) files this response in opposition to NSK Ltd.’s (“NSK”) motion to exclude certain opinions of Mr. Eric Benstock (DE 1470).¹ Mr. Benstock’s opinions that the bearings installed in the pump at Tank 80-8 were genuine NSK bearings which failed due to voids formed in the manufacturing process are well-founded, supported by scientific analysis and data, and satisfy the requirements of Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

I. INTRODUCTION

In its latest attempt to excise itself from any responsibility in this case, NSK has sought to exclude some of the opinions of ITC’s expert, Mr. Benstock, by claiming first that the voids formed in the ball bearings cannot be tied to NSK’s manufacturing process, and second, by surmising that the ball bearings—stamped with the telltale labels of “NSK” and “JAPAN”—may not have been manufactured by NSK at all. This is on top of NSK presenting the only expert related to this case to claim that the origin and cause of the product leak that led to the fire somehow originated from a ruptured recirculation line, and not at the Tank 80-8 pump. Ex. 1, Joseph Rept. at 3.

Like its own dubious origin and cause theory, NSK’s attempts to attack Mr. Benstock’s expert theories also miss the mark. Because Mr. Benstock has employed sound methodologies and used sufficient data to confirm his opinions that (1) the NSK ball bearings in Tank 80-8’s pump are genuine; and (2) that the voids in the bearings formed

¹ ITC contends that this motion is now moot in light of Plaintiffs’ counsel’s statement at the August 17, 2023 status conference that NSK will be formally dismissed from these personal injury cases. ITC presumes a proposed dismissal order is forthcoming. In the interim, ITC is filing this response in an abundance of caution.

during the manufacturing process, rather than as a result of operations, NSK's motion must be denied.

II. FACTUAL BACKGROUND

Mr. Benstock is a Director of Operations and Consulting Engineer for McDowell Owens Engineering, a forensic engineering and failure analysis company that has operated since 1986.² Ex. 2, Benstock CV. Mr. Benstock has a Bachelor of Science Degree in Mechanical Engineering and is a Licensed Professional Engineer in 12 states, an Incorporated Engineer in the United Kingdom, and a Certified Fire and Explosion Investigator with the National Association of Fire Investigators. Benstock Rept. (DE 1470-7) at 1. He has been a practicing consultant and forensic engineer since 1995. Ex. 2, Benstock CV, giving him over 27 years of experience in forensic engineering and failure analysis. Benstock Rept. at 1. Mr. Benstock specializes in mechanical system, equipment, and component failure analysis as well as fire and explosion origin and cause determination. Ex. 2, Benstock CV. Mr. Benstock has investigated numerous fires and explosions at large commercial and industrial facilities including chemical and process facilities, offshore and onshore oil/gas production facilities, and large storage facilities. *Id.* He has conducted numerous investigations of mechanical components and systems. *Id.* Mr. Benstock has also spent years analyzing the evidence in this case and was present at a site inspection less than two months after the fire. Benstock Rept. at 2. Mr. Benstock's preparation for providing his analysis in this case included, among other inquiries,

² McDOWELL OWENS, <https://mcdowellowens.com/>.

attending four site inspections, 14 evidence inspections, and one exemplar pump inspection. Benstock Rpt. at 2.

Utilizing his education, training, and experience, Mr. Benstock issued his report in this matter on March 1, 2023, in which he reached the following conclusions regarding the evidence in this case:

- “[T]he subject NSK bearing in the Tank 80-8 pump was a genuine NSK bearing product.”
- “Some of the balls from the subject NSK 5313 bearing remained relatively intact following the incident and were, for the most part, free of excessive rotational wear,” yet still demonstrated fractures and void spaces in their interiors.
- No evidence supports abnormal operating parameters of the pump, so there are no conditions indicating a ball failure caused by operations of the pump.
- Because there is no evidence of operational causes for the voids in the balls, it is likely that the void space “is an inherent defect resulting from the manufacturing of the steel balls in the NSK 5313 bearing.”
- The void in the subject NSK 5313 bearing “is responsible for the premature failure of the bearing, which continued while the pump was in operation until the bearing bound, seized, or was destroyed,” and caused even greater vibrations along the shaft and into the mechanical seal.
- The vibration of the mechanical seal resulted in the detachment of the mechanical seal, which allowed for the release of naphtha.
- “The defect with the subject NSK bearing ball was not discoverable by ITC as the defect(s) was internal of the balls and overall assembly.”
- There is no evidence that the rebuilding of the Tank 80-8 pump was improperly performed by ITC.
- There is no evidence that the actions or inactions of ITC in rebuilding the Tank 80-8 pump were causally related to the subject incident.

Benstock Rept. at 19.

NSK has sought to exclude two of these opinions, contending that Mr. Benstock (1) did not conduct a sufficient analysis of the bearings to determine whether the failed bearings found in the Tank 80-8 pump were genuine or counterfeit; and (2) cannot opine on whether NSK's manufacturing process caused the voids in the ball bearings or dismiss NSK's hypothesis as to how the voids could have been caused by operational issues. NSK's challenges are meritless.

III. LEGAL STANDARD

Federal Rule of Evidence 702 provides that an expert may testify if “the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.” Rule 702 requires that an expert’s testimony be relevant and reliable. *See Curtis v. M&S Petroleum, Inc.*, 174 F.3d 661, 668 (5th Cir. 1999) (citing *Daubert*, 509 U.S. at 592-93). Additionally, (1) the testimony itself must be “based upon sufficient facts or data,” (2) the testimony must be “the product of reliable principles and methods,” and (3) “the expert [must have] reliably applied the principles and methods to the facts of the case.” FED. R. EVID. 702.

In *Daubert*, the Supreme Court identified certain non-exclusive factors courts can consider in making this assessment. *Daubert*, 509 U.S. at 593-94. The Court has made clear, however, that these factors are not to be applied mechanically and do not constitute a “definitive checklist or test.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999). Ultimately, “the trial judge [has] considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable.” *Id.* at 152.

“[W]hether *Daubert*’s specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine.” *Id.* at 153.

“Particularly in a jury trial setting, the court’s role under Rule 702 is not to weigh the expert testimony to the point of supplanting the jury’s fact-finding role.” *Puga v. RCX Solutions, Inc.*, 922 F.3d 285, 294 (5th Cir. 2019). Rather, “the court’s role is limited to ensuring that the evidence in dispute is at least sufficiently reliable and relevant to the issue so that it is appropriate for the jury’s consideration.” *Id.* As a result, “the rejection of expert testimony is the exception rather than the rule.” *Id.* (citing FED. R. EVID. 702 advisory committee notes (2000) (internal citations omitted)).

IV. ARGUMENT

A. Mr. Benstock’s conclusion that the failed 5313 bearing is a genuine NSK bearing is an expert opinion.

NSK begins by mischaracterizing Mr. Benstock’s analysis of the bearings to determine whether they are counterfeit or genuine, claiming that he has conducted nothing more than a lay “eyeball test.” DE 1470 at 1, 7-8. This argument misunderstands Mr. Benstock’s methodologies as well as the difference between lay and expert testimony.

“[T]he distinction between lay and expert witness testimony is that lay testimony results from a process of reasoning familiar in everyday life, while expert testimony results from a process of reasoning [that] can be mastered only by specialists in the field.” *Andrews v. Rosewood Hotels & Resorts, LLC*, 575 F. Supp. 3d 728, 735 (N.D. Tex. 2021) (quoting *United States v. Yanez Sosa*, 513 F.3d 194, 200 (5th Cir. 2008)). “Jurors are supposed to

reach their conclusions on the basis of common sense, common understanding and fair beliefs, grounded on evidence consisting of direct statements by witnesses or proof of circumstances from which inferences can fairly be drawn.” *Huffman v. Union Pac. R.R.*, 675 F.3d 412, 419 (5th Cir. 2012). “This general rule gives way, though, when conclusions as to the evidence cannot be reached based on the everyday experiences of jurors, making expert testimony necessary to evaluate the issue.” *Id.*

Mr. Benstock described the scientific methodology and technical data upon which he based his analysis in his report and in his deposition. To conduct his analysis, Mr. Benstock ordered a set of comparable 6313 bearings from Motion Industries, an authorized distributor of NSK bearings. Benstock Rept. at 6.³ Mr. Benstock used the exemplar bearing for a comparative analysis of the “NSK,” “JAPAN,” and “5313” stampings between the failed 5313 bearing and an exemplar 6313 bearing; he also analyzed other physical characteristics, including shoulders and configuration, of each bearing to determine that the details were consistent between the two bearings. Benstock Dep., DE 1470-8 at 83:2-7; 85:3-10; 85:13-18. Mr. Benstock’s opinions are based on a thorough assessment of a representative sample of bearings, real-world information, and years of experience as a mechanical engineer familiar with bearing components.

³ Mr. Benstock tried to obtain a 5313 exemplar bearing in 2020 but was advised that, due to COVID, the bearing was not available and would have to be custom ordered and manufactured in Japan. Benstock Rpt. at 6. Mr. Benstock instead ordered a 6313 bearing to use as an exemplar for the comparative analysis. *Id.* 6313 bearings are single-row analogues to double-row 5313 bearings and are used in the same pump applications. *See id.* at 7. Although Mr. Benstock recognizes that the bearings were not the exact same, Mr. Benstock’s analysis showed that the “stampings and markings … appear[ed] to be identical,” so much so that Mr. Benstock “could take the 5313 markings on the outer race and basically overlay it on the 6313, and other than the 6 and the 5, they’d be the same.” Benstock Dep. at 87:6-13.

Mr. Benstock's analysis was not solely limited to these two sets of bearings. He also analyzed two other sets of bearings identified as manufactured by NSK but intentionally ordered from companies that were not listed by NSK as authorized distributors. Upon comparison, Mr. Benstock found that these bearings were not physically consistent with the bearings located in Tank 80-8's pump, nor were they consistent with the exemplar bearing that he ordered from NSK's authorized distributor to conduct the counterfeit analysis. Benstock Dep. at 138:1-4 (noting that bearings from the non-authorized suppliers "were not anywhere near consistent with the font size or stampings and stamping location with the one from Motion Industries, and/or the one from the pump"); 142:1-5 (noting that he did not "go any further because the other two bearings ... weren't consistent with" the bearing in the pump or the bearing ordered from Motion Industries). Based on these observations, Mr. Benstock concluded that the failed 5313 bearing was, to a reasonable degree of certainty, a genuine NSK bearing. Benstock Rept. at 6-7.

Mr. Benstock's methodology, as well as the data upon which he bases his conclusions, rests squarely within the realm of expert testimony. Courts reviewing similar expert challenges have understood, and rightly held, that visual observations can qualify as reliable bases for expert opinions. For example, in *Andrews*, 575 F. Supp. 3d at 732, 737-739, the court declined to exclude the opinions of an expert who opined on the "human factors" necessary to inform patrons of the proper entrance into an infinity pool based upon the "visual and perceptible features of the infinity pool." Plaintiffs in that case argued that the jury was just as capable of reviewing photographs of the accident scene to draw their own conclusions about the adequacy of the visual cues that the expert opined on, but the

Court disagreed, finding that the expert's analysis "takes seemingly ordinary observations and applies scientific, ergonomic analysis to specific visual or perceptual cues." *Id.* at 737-38. *See also Clena Investments, Inc. v. XL Specialty Ins. Co.*, 280 F.R.D. 653, 663, 664 (S.D. Fla. 2012) (finding that a structural engineer's "experience as an engineer and his visual inspection of [a property] ... lay a permissible foundation" for his opinions as to causation of roof damage, and he was qualified even though he did not perform other methodologies, such as "destructive testing or a mold investigation").

Similar to the experts in these cases, Mr. Benstock's visual inspection— informed by his engineering background, years of technical and consulting experience, and study of the literature associated with genuine and counterfeit bearings—renders him qualified as an expert to issue his opinion that the bearing was not counterfeit.

Indeed, Mr. Benstock's comparative analysis comports with the very data used by NSK in its own publications to describe "[h]ow to identify authentic NSK bearings," as opposed to counterfeits. A whitepaper NSK published in 2020 in fact suggests many of the very same analytical tools that Mr. Benstock used: "Are markings similar to standard manufacturer markings? Are there any marking at all? Inspect the rolling elements and raceways. Look for rough finishes and abnormal roller appearance. Are there markings on different areas of the bearings than normal? Is the product wrapped in appropriate shipping material? Was it purchased through an authorized channel?" Ex. 3, NSK Whitepaper at 6.

In another NSK document, describing a Homeland Security Investigations (HSI) Counterfeit Bearing Raid, photographs of suspected counterfeit bearings are identified by their visual inconsistencies with genuine NSK bearings. Ex. 4, HSI Counterfeit Bearing

Raid at 2, 5 (“Etching orientation not consistent. ‘Japan’ missing on one ring. Also, depth of etching is different”; “Mixture of stamp and etch markings”).

NSK’s criticisms of Mr. Benstock’s analysis—which relies upon the same methods and data points that NSK and homeland security inspectors use when analyzing counterfeits—are therefore baseless. But even setting aside NSK’s inconsistent views of what constitutes a valid counterfeit analysis, “[q]uestions relating to the bases and sources of an expert’s opinion affect the weight to be assigned that opinion rather than its admissibility.” *Puga*, 922 F.3d at 294 (citing *Rock v. Arkansas*, 483 U.S. 44, 61 (1987)).

B. Mr. Benstock’s knowledge and review of ITC’s operations supports his conclusion that the voids likely formed during NSK’s manufacturing process.

NSK attempts to collaterally attack Mr. Benstock’s conclusion that the voids formed during the manufacturing process. But the focus of Mr. Benstock’s opinion was not the manufacturing process itself but a mechanical engineering analysis of how the voids could *not* have formed: during operations.

Mr. Benstock reviewed the operations history—through contemporaneous documents and fact witness testimony—associated with the Tank 80-8 pump to support his analysis that the voids would not have formed during operations, as (1) the bearings were replaced on the pump in December 2018, just three months before the fire; (2) the pump only ran 224 hours during that three-month period before the bearing assembly failed; and (3) during that time, there were no reports of operational issues with the pump. Benstock Rept. at 7. Based upon these observations, Mr. Benstock determined that there was “no

evidence that the pump was not properly operating and thus contributory to the presence of the void(s) in the ball(s) of the 5313 bearing assembly.” Benstock Rept. at 7.

As a result of that analysis, Mr. Benstock also opined in his deposition that he disagreed with NSK’s assertion that the bearing balls inexplicably melted from the inside out and developed voids through a “hollow ball” phenomenon or Mannesmann effect theory. Benstock Dep. 96:22-97:23; 200:22-201:11. Though NSK claims that Mr. Benstock never engaged with this theory, his testimony instead shows his *disagreement* with that theory and its applicability based on his mechanical engineering background and general scientific principles of heat transfer. *Id.* at 96:22-97:23 (dismissing the hollow ball theory based on his “understanding of mechanics and heat transfer” that would have prevented the bearings from forming “without melting the exterior of the ball itself”); 200:22-201:11 (noting that he did not understand “from a mechanical engineering perspective and a heat transfer perspective how you can heat the core of a solid object when the heat induction is external of that . . . to create a void while not melting the exterior of the ball at the same time if it’s all the same material”). Mr. Benstock’s testimony clearly indicates that he does not *agree* with the hollow ball theory, based upon “heat transfer and mechanical principles,” and that he would defer any more detail regarding a *metallurgical* perspective on that theory to Dr. Marshall Clark. *Id.* at 204:2-10.

After eliminating an operations-based cause of void formation and disagreeing with NSK’s hand-selected void formation theory as scientifically invalid based on engineering and heat transfer principles, Mr. Benstock offers the most plausible explanation of the bearing failure: that the voids were present when they arrived at ITC’s facility and placed

into the pump. Mr. Benstock conducted this analysis by pointing to the factors that could have allowed defective bearings to slip through NSK's manufacturing quality control measures.

First, Mr. Benstock identified that NSK does not inspect the steel that it purchases and forms into balls, but relies on other parties, including its suppliers, to complete those reviews. Ex. 5, NSK Material Supplier Quality Assurance Manual at 1, 14 (setting out "the basic requirements for quality assurance to be carried out by material suppliers"; providing process for "supplier's person in charge of quality assurance" to notify NSK of a defective lot); Ex. 6, Chinitz Dep. at 150:7-10 (acknowledging that the testing for the steel occurs "before it gets shipped" to NSK).

Second, he noted that NSK does not inspect the internal structure of all manufactured balls once cold forging has been completed, even though various quality traits including microstructure, hardness, and crushing load could be tested. Ex. 7, NSK Presentation, "Ball Technology, Standards, and Manufacturing" at NSK_CORP_MUNOZ_00001023-1024 (describing surface inspection for balls).

Third, he considered that NSK's quality control procedure weighs multiple balls together for set tolerances, rather than individual balls, allowing for potential defects to slip by unnoticed. Benstock Rept. at 5-6; Ex. 6, Chinitz Dep. at 163:14-17, 189:5-6. ("[T]he weight check is measuring the – the box of balls so we know how many balls are in each box. ... [I]f we didn't meet the weight, that ... box of balls wouldn't be shipped.").

Mr. Benstock learned of these quality control gaps from NSK's own manufacturing and quality assurance documents along with the deposition of NSK's corporate

representative. Benstock Rept. at 5-6. Based on his “30 years looking at types of failures and at several different types of materials,” he concluded that “the only place that that void can come from is the bar stack [sic],” which NSK’s quality controls would not catch. Benstock Dep. at 99:8-11.

This analysis is more than sufficient, because, as a matter of law, neither ITC nor Mr. Benstock (nor the plaintiffs) is required under Texas law to show how the defect formed during the manufacturing process. “Under Texas law, [a] manufacturing defect exists when a product deviates, in its construction or quality, from the specifications or planned output in a manner that renders it unreasonably dangerous.” *Norman v. Bodum USA, Inc.*, 44 F.4th 270, 272 (5th Cir. 2022) (internal quotations omitted) (citation omitted). “A manufacturing defect may be established exclusively through circumstantial evidence.” *Id.* “[B]ecause a consumer is not in a position to know the manufacturing process and how the defect might have occurred,” a party alleging a manufacturing defect “does not have to show specifically how a product became defective.” *Sipes v. Gen. Motors Corp.*, 946 S.W.2d 143, 155 (Tex. App.—Texarkana 1997, writ denied). Despite NSK’s attempts to turn this well-accepted legal principal on its head, courts abide by it; otherwise, if the law were as NSK claims, an expert could never opine that a failure was due to a manufacturing defect absent physical or documentary evidence of the specific defect actually occurring in the manufacturing process in the product at issue.

Because courts have rejected that theory, NSK has failed to raise a plausible argument as to why Mr. Benstock’s opinions should be excluded.

V. CONCLUSION

For all of these reasons, ITC respectfully requests that the Court deny NSK's motion to exclude the opinions and testimony of Mr. Eric Benstock.

Dated: August 18, 2023

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CERTIFICATE OF SERVICE

I hereby certify that on August 18, 2023, a copy of this document has been served on all counsel of record via the Court's electronic filing system.

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